

We claim:

*Sub A2* 1. A method for inducing production of butyrate by bacteria in the human colon comprising administering D-tagatose to a human in an amount effective to induce production of butyrate.

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2. A method according to claim 1 wherein D-tagatose is administered orally.

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3. A method according to claim 2 wherein D-tagatose is administered in a daily amount of 5 to 30 grams.

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4. A method according to claim 3 wherein the daily amount is 5 to 15 grams.

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5. A method according to claim 2 wherein D-tagatose is administered orally in a food product.

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6. A method according to claim 5 wherein the food product is selected from the group consisting of a confectionery, chewing gum, ice cream, dessert, soft drink, breakfast cereal, yogurt, health drink and health bar.

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*Sub A3* 7. A method for stimulating growth of lactobacilli and lactic acid bacteria in the human colon comprising administering D-tagatose to a human in an amount effective to stimulate growth of lactobacilli and lactic bacteria in the human colon.

8. A method according to claim 7 wherein D-tagatose is administered orally.

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9. A method according to claim 8 wherein D-tagatose is administered in a daily amount of 5 to 30 grams.

10. A method according to claim 9 wherein the daily amount is 5 to 15 grams.

5 11. A method according to claim 8 wherein D-tagatose is administered orally in a food product.

12. A method according to claim 11 wherein the food product is selected from the group consisting of a confectionery, chewing gum, ice cream, dessert, soft drink, breakfast cereal, yogurt, health drink and health bar.

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